

## Claims

1. A battery separator obtained by applying a polymer having in the molecule a carbodiimide unit represented by the following formula (I):



(wherein R means an organic group and n means an integer of 1 to 10,000)

to a porous sheet substrate.

2. The battery separator of claim 1, wherein the sheet substrate is a nonwoven fabric comprising polyolefin fibers.

3. The battery separator of claim 1, wherein the sheet substrate is a porous sheet formed by sintering a powder of ultrahigh-molecular polyethylene.

4. The battery separator of claim 1, wherein the particulate or powdery polymer represented by formula (I) is present in pores of the sheet substrate.

5. The battery separator of claim 1, wherein at least part of the surface of the sheet substrate is coated with the polymer of formula (I).

6. The battery separator of claim 1, which comprises a porous sheet substrate produced by aggregating polycarbodiimide-coated polymer particles obtained by forming a coating layer of the polymer of formula (I) on the surface of core particles.

7. The battery separator of claim 6, wherein the core particles are a polyolefin.